Claims

1. A non-stick coating formulation comprising:

a. an acrylic polymer,

b. an alcohol selected from the group consisting of a diol, a polyol, and mixtures thereof, and

c. a fluoropolymer;

wherein the ratio of acrylic polymer to the alcohol is between about 90:10 and about 10:90 by weight.

2. The non-stick coating formulation of claim 1, further comprising a silane.

3. The non-stick coating formulation of claim 1, wherein the fluoropolymer is PTFE.

4. The non-stick coating formulation of claim 1 wherein the alcohol is selected from the group consisting of a polyurethane polyol, a polyester diol, and mixtures thereof.

5. The non-stick coating formulation of claim 1, wherein the ratio of acrylic polymer to the alcohol is about 50:50 by weight.

6. The non-stick coating formulation of claim 1, wherein the ratio of acrylic polymer to the alcohol is between about 60:40 and about 40:60 by weight.

7. The non-stick coating formulation of claim 1, wherein the ratio of acrylic polymer to the alcohol is about 15:85 by weight.

8. The non-stick coating formulation of claim 1, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 100:60 by weight.

9. The non-stick coating formulation of claim 1, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 70:30 by weight.

10. The non-stick coating formulation of claim 1, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 30:70 by weight.

11. The non-stick coating formulation of claim 1, wherein the alcohol is a polyester diol.

12. The non-stick coating formulation of claim 1, wherein the alcohol is a polyurethane polyol.

13. The non-stick coating formulation of claim 1, further comprising a polyether modified dimethylpolysiloxane copolymer.

14. The non-stick coating formulation of claim 9, further comprising a polyether modified dimethylpolysiloxane copolymer.

15. The non-stick coating formulation of claim 10, further comprising a polyether modified dimethylpolysiloxane copolymer.

16. A non-stick coating comprising:

a. an acrylic polymer cross-linked with an alcohol selected from the group consisting of a diol, a polyol, and mixtures thereof; and

b. a fluoropolymer;

wherein the ratio of acrylic polymer to alcohol is between about 90:10 and about 10:90 by weight.

17. The non-stick coating of claim 16, wherein the acrylic polymer and the alcohol are cross-linked with melamine.

18. The non-stick coating of claim 16, wherein the acrylic polymer and the alcohol are cross-linked with a methylated melamine formaldehyde in the presence of a blocked acid catalyst.

19. The non-stick coating of claim 16, wherein the ratio of acrylic polymer to the alcohol is between about 60:40 and about 40:60 by weight.

20. The non-stick coating of claim 16, wherein the ratio of acrylic polymer to the alcohol is about 50:50 by weight.

21. The non-stick coating of claim 16, wherein the ratio of acrylic polymer to the alcohol is about 15:85 by weight

22. The non-stick coating of claim 16 further comprising a silane.

23. The non-stick coating of claim 16, wherein the alcohol is selected from the group consisting of a polyester diol, a polyurethane polyol, and mixtures thereof.

24. The non-stick coating of claim 16, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 100:60 by weight.

25. The non-stick coating of claim 16, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 70:30 by weight.

26. The non-stick coating of claim 16, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 30:70 by weight.

27. The non-stick coating of claim 26, wherein the alcohol is a polyester diol.

28. The non-stick coating of claim 16, wherein the alcohol is a polyurethane polyol.

29. The non-stick coating of claim 16, further comprising a polyether modified dimethylpolysiloxane copolymer.

30. The non-stick coating of claim 25, further comprising a polyether modified dimethylpolysiloxane copolymer.

31. The non-stick coating of claim 26, further comprising a polyether modified dimethylpolysiloxane copolymer.

32. A method of forming a non-stick coating on substrate, the method comprising the following steps:

a. preparing a non-stick formulation comprising a fluoropolymer, an acrylic polymer and an alcohol selected from the group consisting of a diol, a polyol, and mixtures thereof, wherein the ratio of acrylic polymer to the alcohol is between about 90:10 to about 10:90 by weight;

b. applying the non-stick formulation to a substrate; and,

c. curing the formulation in a conventional or infrared oven.

33. The method of claim 32 further comprising the step of applying a silane primer before applying the non-stick formulation.

34. The method of claim 32, wherein the substrate is a silicone rubber substrate.

35. The method of claim 32, wherein the alcohol is selected from the group consisting of a polyester diol, a polyurethane polyol, and mixtures thereof.

36. The method of claim 32, wherein the alcohol is a polyester diol.

37. The method of claim 32, wherein the alcohol is a polyurethane polyol.

38. The method of claim 32, wherein the substrate has a durometer of less than 20.

39. The method of claim 32, wherein the substrate has a durometer of less than 10.

40. The method of claim 32, wherein the ratio of acrylic polymer to the alcohol is between about 60:40 and about 40:60 by weight.

41. The method of claim 32, wherein the ratio of acrylic polymer to the alcohol is about 50:50 by weight.

42. The method of claim 32, wherein the ratio of acrylic polymer to the alcohol is about 15:85 by weight.

43. The method of claim 32, wherein the non-stick formulation further includes a blocked acid catalyst.

44. The method of claim 32, wherein the non-stick formulation further includes a melamine.

45. The method of claim 44, wherein the melamine is a methylated melamine formaldehyde.

46. The method of claim 32, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 100:60 by weight.

47. The method of claim 32, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 70:30 by weight.

48. The method of claim 32, wherein the ratio of acrylic polymer and the alcohol to fluoropolymer is about 30:70 by weight.

49. The method of claim 47, wherein the non-stick formulation further includes a polyether modified dimethylpolysiloxane copolymer.

50. The method of claim 48, wherein the non-stick formulation further includes a polyether modified dimethylpolysiloxane copolymer.